Program Agenda for International Conference on Solar Electric Concentrators

Monday, May 20, 2002

Location: Loyala A/B, lower level of the Regency Conference Center

Session 1: Past, Present, and Future of Concentrating Photovoltaics

08:00 Announcements and Welcome, R. McConnell

08:05 **Richard Swanson**, SunPower, Keynote address: "Perspectives on the Past, Present, and Future of Concentrating PV"

08:30 **Robert McConnell**, NREL: "Important Manufacturing and Reliability Issues Affecting the Large-Scale Deployment of Concentrating PV"

08:50 **Vahan Garboushian**, Amonix: "Continuous Installation of Concentrating PV in the Southwest"

09:10 **John Lasich**, Solar Systems: "Dish Concentrator-PV Systems"

Session 2: Development of New PV Concentrator Technology

09:30 Poster previews followed by poster viewing

Andrew Blakers James Cotsell, Joe Coventry, Makie Dennis and John Smeltink, Australian National University: "Photovoltaic trough concentrating system"

Maria Brogren, and Bjorn Karlsson, Uppsala University, Vattenfall Utveckling AB, and Lund University: "Low-concentrating, water-cooled PV-thermal hybrid systems for high-latitudes"

Kenji Araki and Masafumi Yamaguchi, Toyota Technological Institute: "Japanese R&D activities of multi-junction and concentrator solar cells"

Gabriel Sala, I. Anton, Instituto de Energia Solar and J. Monedero, M.P. Friend, M. Cendagorta, ITER: "Operational results of the EUCLIDES PV concentrator"

Jesus Alonso, ISOFOTON: "Very High Concentrator Module based on GaAs Solar Cells and TIR-R lens"

Mark O'Neill and A. J. McDanal, ENTECH: "Fresnel lens concentrators: from 20-sun silicon-cell modules to 400-sun multi-junction-cell modules"

Tim Bruton, BP Solar: "BP Solar's experiences with concentrator systems"

Akira Terao, SunPower, "An array of products and solutions for concentrator PV systems"

Raed Sherif, Hector Cotal, Richard King, Anastacio Paredes, Tom Meza, Greg Glenn, Dmitri Krut, Ron Diamond, Nasser Karam, and Jeff Peacock, Spectrolab: "High concentration multijunction PV cells and receivers"

Ugur Ortabasi, United Innovations: "Dish/Photovoltaic cavity converter system for ultimate solar-to-electricity conversion efficiency

Liang Ji, Todd Arends, Robert Hammond, and Govendasamy TamizhMani, ASU Photovoltaic Testing Laboratory: "IEEE qualification testing of concentrator PV modules: Test facilities and dome preliminary test results"

Session 3: Research Programs and Cost Issues

11:00 **Martha Symko-Davies**, Rommel Noufi, and Sarah Kurtz, NREL: "Identifying Critical Pathways for High-Performance PV"

11:15 **Allan Lewandowski**, NREL: "Bringing PV into the Concentrating Solar Power Program""

11:30 **Antonio Luque**, Instituto de Energia Solar: "The Role of Concentrators in the 3rd Generation Converters and Cost-Effective Photovoltaic Concepts"

11:45 **Vahan Garboushian**, Amonix: "Commercialization Paths"

12:00-13:30 - Lunch, John Perlin: "History of Solar Concentrators"

Session 4: Situation Analysis of End Users
Tentative Agenda (10 minute presentations with 5 minute question period)
13:30-13:45 **Ted Kennedy**, Climate Change Team, World Bank: "A World Bank/Global Environment Facility Perspective on Renewable Energy and Implications for Solar Electric Concentrators"
13:45-14:00 **Kai Anderson**, Offices of the US Senate: "The National Perspective on Renewable Energy and Its Implications for Solar Electric Concentrators"
14:00-14:15 **Marwan Masri**, California Energy Commission: "The California Perspective on Renewable Energy and Its Implications for Solar Electric Concentrators"
14:15-14:30 **Carl Linvill**, Office of the Governor: "The Nevada Perspective on Renewable Energy and its Implications for Solar Electric Concentrators"
14:30-14:45 **Peter Johnston**, Pinnacle West: "An Electric Utility's Perspective on Renewable Energy and Its Implications for Solar Electric Concentrators"
14:45-15:00 Coffee Break
15:00-17:00 Roundtable discussion involving the audience and presenters. Key questions are:

* What are the important opportunities for solar electric concentrators?
* What are the important barriers?
* How would success be measured?
* What can we do to respond to these opportunities and mitigate any barriers?

18:00-20:00 – Exhibitors for the Photovoltaic Specialists' Conference will open their exhibits (see http://ewh.ieee.org/soc/pvsc/exhibits.html)

20:00-21:00 - IEEE 1611 Standard: Recommended Practice for Characterizing Solar Tracker Controllers Used for Solar Electric Systems.

Location: Dauphine Room

Background:

There is currently no industry-wide defined recommended practice for solar tracker controllers used for solar electric systems, both flat plate and concentrators. Each vendor designs, builds and specifies the functionality and accuracy without uniform definition. Therefore, it is difficult to specify the requirements for purchasing, to compare the products from different vendors, and to verify the quality of the products. This recommended practice will define the minimum parameters to be specified when defining a solar tracker, and the method to measure these parameters. This will be the first meeting; the success of this effort will depend on the participation of volunteers. Please consider volunteering your time for this important work.

If you have questions about this meeting please email l.ji@asu.edu

Tuesday, May 21, 2002

The daytime sessions are joint sessions with the PVSC:

10:30-12:15 5O1 Concentrator Systems (http://ewh.ieee.org/soc/pvsc/oral_501.html)

13:30-15:15 3O2 High Efficiency Cells and Spectral Issues (http://ewh.ieee.org/soc/pvsc/oral_3O2.html)

15:40-17:40 3P1 High Efficiency and TPV Cells and Spectral Issues (http://ewh.ieee.org/soc/pvsc/poster_3P1.html)

20:30-22:00 - Special Session: Concentrator Reference Conditions, Martha Symko-Davies as facilitator (Dauphine Room)

Location: Dauphine Room

20:30-20:35 Description of existing conditions - Keith Emery

20:35-20:40 Proposal for new direct reference spectrum - Keith Emery
20:40-20:50 Spectral Model - Daryl Myers
20:50-21:15 Presentations by others
21:15-22:00 Open Discussion

If you wish to make a presentation or have questions about this session, please email Keith_Emery@nrel.gov

Wednesday, May 22, 2002
Joint sessions with the PVSC include
10:10-12:00 3P3 Advanced and Novel High efficiency Concepts (http://ewh.ieee.org/soc/pvsc/poster_3P3.html)
13:30-15:15 3O3 Advanced and Novel High Efficiency Concepts (http://ewh.ieee.org/soc/pvsc/oral_3O3.html)
15:35-17:30 5P2 Concentrator Systems (http://ewh.ieee.org/soc/pvsc/poster_5P2.html)